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invention every part of the process except that of separating the fibres of the flax from each other by bleaching it, and by afterwards either passing it between rollers pressed together with force sufficient to separate such of the fibres of the flax as have not been sufficiently separated by the process of bleaching, or beating it with hammers, or beetles, or by other modes of percussion sufficient to effect the same purpose.

Observations communicated by the Patentee.

Such is the enclosed specification of our invention; the design of which it may not be amiss thus briefly to explain.

The flax-machinery hitherto used being found inadequate to any but the coarsest yarns, the finer numbers have been consequently confined to hand-spinning, an operation in itself so tedious and expensive that the cost of any fabric dependent on it must necessarily be much enhanced; and hence chiefly the high price of linen, cambrie, and lace, when compared with articles of equal texture made from cotton, or even silk, the raw material of which exceeds in value that of flax fifty fold.

To preclude, therefore, the necessity of hand-spinning in the higher numbers, of flax, by adapting the article to the like machinery as cotton, is the object of the process above specified; and, in effecting this purpose, it is hoped that the foundation of a manufacture has been laid, which may enable this country, at no distant period, to meet the French in a market, hitherto their own, that of laces, lawn, and cambrie.

Specification of the Patent granted to William Parker, of Whitechapel, in the County of Middlesex, Oil and Colourman; for an Improvement in the making or manufacturing of Green Paint.

That in compliance with the said proviso, I the said William Parker do hereby declare that my said invention consists in combining fixed alkali with mineral oxyd and precipitate of copper, and thereby producing a permanent pea-green colour, for house and ship painting, and is not liable to decomposition by salt water, which I prepare in the following manner; that is to say: take fourteen ounces of crude potash, fourteen drachms of

crude white arsenic, and boil them in two gallons of soft water, until quite dissolved; then put the liquor into a cast-iron vessel to cool and settle; draw off the liquor clear from the sediment, and put it into a vessel that will hold twenty gallons; add to it six gallons of clear soft water, cold; take one pound of Roman vitriol, and boil it in two gallons of soft water till dissolved; put the solution into an open vessel till quite cold, then to be added gradually to the aforesaid solution of fixed alkali, stirring it well all the time, which will produce a genuine green oxyd, then to proceed in the usual way of mineral green. A most essential part of this preparation is to make the mineral green without using caustic alkali, which is the general way of manufacturing it for this purpose: the caustic alkali acts so powerfully on the vegetable quality of linseed oil used in this preparation, and thereby rendering it mucilaginous.

Preparation of precipitate of copper to mix with the aforesaid oxyd; viz. take one pound of Roman vitriol, and boil it till dissolved in two gallons of soft water, at the same time dissolve in another vessel half a pound of the first soft American pearlash; put the solution of vitriol, boiling hot, into a vessel that will hold ten or twelve gallons; then add to it gradually the solution of pearlash, boiling hot; to be well stirred all the time. On mixing the solution together it will cause a strong effervescence; if the pearlash is good it will be enough to precipitate the vitriol, which will be known by the effervescence immediately subsiding, and the precipitate falling to the bottom of the vessel, and thereby producing a fine green colour; when settled, draw off the clear liquor; then put it into bags made of canvas, to filter; and when well drained, to be laid on chalk stones, to draw a further quantity from it; then to be put into a stove to dry.

* Preparation of mixing or combining with mineral substances in linseed oil: Take one pound of the genuine mineral green, prepared as herein described, to be well powdered; one pound of the precipitate of copper, one pound and a half of refiners' blue verditta, three pounds of white lead dry powdered, three ounces of sugar of lead, powdered fine; the whole of these ingredients to be mixed up in linseed oil, and ground in a levigating mill, passing it through until quite

fine: it will thereby produce a bright mineral pea-green paint, will preserve a blue tint, will keep any length of time, in any climate without injury, by putting oil or water over it

Directions for using the said colour for house or ship painting: take one pound of the green colour paint, prepared as aforesaid, with one gill of pale boiled oil; mix them well together; this will produce a strong pea-green paint; the tint may be varied at pleasure, by adding a further quantity of white lead, ground in linseed oil. This colour will stand the weather, and resist salt water; it may also be used for flattening rooms, by adding three pounds of white lead, ground in half linseed oil and half turpentine, to one pound of the green; then to be mixed up in turpentine spirits, fit for use. It may also be used for painting Venetian window-blinds, by adding to one pound of the green paint ten ounces of white lead, ground in turpentine; then to be mixed up with turpentine varnish for use. In all the aforesaid preparations it will retain a blue tint, which is very desirable. When used for blinds a small quantity of Dutch pink may be put to the white lead if the colour is required of a yellow cast.

On the proper Construction of Hot-bed Frames,
By Thomas Andrew Knight, esq. F.R.S.
&c.

(From the Transactions of the Horticultural Society of London.)

The most ignorant gardener would feel himself offended, were his skill in making a hotbed, or giving proper directions for the form of a forcing frame, called in question; and this, perhaps, is the principal reason why the structure, and frames of all hotbeds are so perfectly alike. The surface of the bed is made perfectly horizontal, and to give some degree of elevation to the glass, that end of the frame, which is to stand towards the north, is made nearly as deep again as the other; so that if the mould were placed of the same depth (as it ought to be) over the whole bed, the plant would be too far from the glass at one end of the frame, and would want space at the other. To remove this inconvenience, I tried several years ago, the effect of placing the hotbed on an inclined plane of earth, elevated about 15 degrees, making the surface of the dung and mould parallel with it, and adapting the form of a frame to the surface of the bed, by which means

the plants and the mould of the bed became more exposed to the influence of the sun. And as I have not discovered any disadvantages in the plan I have adopted, I have thought a description of it worth sending to the Horticultural Society; for though the improvement be trivial, it is not attended with any expense whatever, since the frame, when made as recommended, costs considerably less than when it is made in the form at present used: and as labour and expense to a very great amount are annually employed in making and managing hotbeds, any improvement in their construction becomes of some importance to the market gardener.

I have often used with great success, a frame and hotbed thus formed for forcing grapes, by placing the bed at three feet distance from the wall, to which the vines were trained, and introducing their branches into the frame, through holes made at the north end of it (the vines having been trained to a south wall) as soon as the first violent heat of the bed had subsided. The white Chasselas grape, thus treated, ripens in July, if the branches of the vine be introduced in the end of April; and a most abundant crop may be thus obtained; but the necessity of pruning very closely renders the branches, which have been forced, unproductive of fruit in the succeeding season; and others, from the wall, must subsequently be substituted. I have always put a small quantity of mould in the frame, and covered it with tiles.

If an inclined plane of earth be substituted for the hotbed, and vines be trained in a frame adapted to it, the grapes (the Chasselas) ripen perfectly in August, and if small holes be made through the sides of the frame through which the young shoots of the vines can extend themselves in the open air, a single plant and a frame of moderate size, will be found to yield annually a very considerable weight of grapes. For this purpose the frames should not be more than eight or ten feet long, nor more than five or six in breadth, or the young shoots will not be so advantageously conducted out of them into the open air; and the depth of the frame, either for the hotbed or inclined plane of earth, should not be less than eighteen inches. The holes in the side of the frame, through which the young shoots are to pass, should of course be closed during the spring, and till wanted; and if the weather be cold, it